

ABSTRACT OF THE DISCLOSURE

An alarm system automatically monitors activity and directional motion in a predetermined area. When the system detects a particular movement in an area, an alarm is triggered that ultimately notifies a system operator or allows the system to initiate some other automated activity. The system detects movement by comparing changes in the center of mass of objects captured in sequential video image frames. In addition, filters may be added to decrease the number of false alarms. Specifically, the alarms may only be generated if the system detects movement in a particular direction and if the moving object detected by the video camera is of a particular size. The system comprises a video camera, video display, and processing unit. The processing unit comprises a bus interface that connects a central processor (CPU), computer memory (RAM and ROM), video processing unit, video output unit, and an input interface unit.